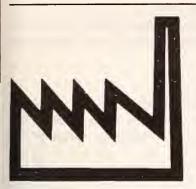
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### PRELIMINARY REPORT INDUSTRY SERIES

# 1987

# Census of Manufactures

MC87-I-27B(P) Issued August 1989

### **COMMERCIAL PRINTING AND MANIFOLD BUSINESS FORMS**

Industries 2752, 2754, 2759, and 2761

#### INTRODUCTION

This report presents preliminary statistics from the 1987 Census of Manufactures for those establishments classified in the industries listed above. These data will be superseded by a more comprehensive final paperbound report. The method of data collection and use of administrative data are discussed in detail in the appendix.

All dollar figures included in this report are at prices current for the year specified and, therefore, unadjusted for changes in price levels. Consequently, when making comparisons to prior years, users should take into consideration the inflation that has occurred.

The definitions of these industries are the same as those used in the 1987 Standard Industrial Classification (SIC) Manual.<sup>1</sup>

### INDUSTRY 2752, COMMERCIAL PRINTING, LITHOGRAPHIC

In the 1987 Census of Manufactures, Industry 2752, Commercial Printing, Lithographic, had employment of 402.5 thousand. The employment figure was 29 percent above the 311.9 thousand reported in 1982.

The total receipts for establishments classified in this industry was \$32.7 billion.

In 1987, establishments in this industry accounted for 94 percent of products considered primary to the industry regardless of the industry in which they were produced

<sup>1</sup>Standard Industrial Classification Manual: 1987. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 041-001-00314-2.

(coverage ratio). In 1982, the coverage ratio was 93. The products primary to this industry appear in table 2 and aggregated to \$31.9 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$14.5 billion in 1987. Data on specific materials consumed appear in table 3.

### INDUSTRY 2754, COMMERCIAL PRINTING, GRAVURE

In the 1987 Census of Manufactures, Industry 2754, Commercial Printing, Gravure, had employment of 23.8 thousand.

The total receipts for establishments classified in this industry was \$3.1 billion.

In 1987, establishments in this industry accounted for 94 percent of products considered primary to the industry regardless of the industry in which they were produced (coverage ratio). The products primary to this industry appear in table 2 and aggregated to \$2.7 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$1.5 billion in 1987. Data on specific materials consumed appear in table 3.

### INDUSTRY 2759, COMMERCIAL PRINTING, N.E.C.

In the 1987 Census of Manufactures, Industry 2759, Commercial Printing, N.E.C., had employment of 125.7 thousand.

The total receipts for establishments classified in this industry was \$9.0 billion.

Address inquiries to Bureau of the Census, Industry Division, Washington, DC 20233, or call Sue Sundermann (301) 763-2510.



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Bureau of the Census

In 1987, establishments in this industry accounted for 88 percent of products considered primary to the industry regardless of the industry in which they were produced (coverage ratio). The products primary to this industry appear in table 2 and aggregated to \$9.1 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$3.7 billion in 1987. Data on specific materials consumed appear in table 3.

### **INDUSTRY 2761, MANIFOLD BUSINESS FORMS**

In the 1987 Census of Manufactures, Industry 2761, Manifold Business Forms, had employment of 53.0 thousand. The employment figure was 7 percent above the 49.5 thousand reported in 1982. Compared with 1986, employment in 1987 decreased 2 percent. The 1986 data are based on the Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

The total value of shipments for establishments classified in this industry was \$7.3 billion.

In 1987, establishments in this industry accounted for 97 percent of products considered primary to the industry regardless of the industry in which they were produced (coverage ratio). In 1982, the coverage ratio was also 97. The products primary to this industry appear in table 2 and aggregated to \$6.7 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$3.5 billion in 1987. Data on specific materials consumed appear in table 3.

### ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used in the tables in this publication:

-	Represents zero.
(D)	Withheld to avoid disclosing data for individual companies; data are included in higher level totals.
(NA)	Not available.
(NC)	Not comparable.
(S)	Withheld because estimate did not meet pub-
	lication standards on the basis of either the
	response rate or a consistency review.
(X)	Not applicable.
(Z)	Less than half the unit shown.
do	Ditto.
n.e.c.	Not elsewhere classified.
n.s.k.	Not specified by kind.
pt.	Part.
r	Revised.
SIC	Standard Industrial Classification.

Other abbreviations, such as lb, gal, yd, doz, bbl, and s tons, are used in the customary sense.

### CONTACTS FOR DATA USERS

Subject Area	Contact	Phone
Census/ASM Durables Nondurables	Kenneth Hansen Michael Zampogna	(301) 763-7304 (301) 763-2510
Current Indus- trial Reports Durables Nondurables	Malcolm Bernhardt Thomas Flood	(301) 763-2518 (301) 763-5911
Import/Export Publications	Foreign Trade Division	(301) 763-5140
Industry Analy- sis and Fore- casts	International Trade Administration	(202) 377-4356

### Table 1. Historical Statistics for the Industry: 1987 and Earlier Years

[Excludes data for auxiliaries. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix]

(Excludes data for	Lexitudes data for auxiliaries. For meaning of appreviations and sympols, see introductory text. For explanation of terms, see appendix j														
		All establi	ishments <sup>3</sup>	All emp	oloyees	Pro	duction wor	kers						Rat	ios
Year <sup>1</sup>	Com- panies² (no.)	Total (no.)	With 20 employ- ees or more (no.)	Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)	Value added by manufac- ture <sup>4</sup> (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expenditures (million dollars)	End-of- year inven- tories <sup>4</sup> (million dollars)	Spe- cial- ization (per- cent)	Cover- age (per- cent)
					IND	USTRY 2	752, COM	IMERCIAL	PRINTING, L	.ITHOGRAPH	IIC				
1987 Census 1986 ASM 1985 ASM 1984 ASM	(NA) (NA) (NA) (NA) (NA)	24 765 (NA) (NA) (NA) (NA)	4 084 (NA) (NA) (NA) (NA)	402.5 337.0 335.4 334.9 315.1	9 115.0 7 513.3 7 097.5 6 841.5 6 052.1	292.7 247.9 248.2 249.0 236.9	582.5 487.5 472.7 473.8 440.1	5 877.7 4 897.0 4 744.7 4 550.3 4 131.5	18 152.2 14 819.2 13 949.0 13 271.2 11 741.8	14 549.7 11 598.9 11 079.8 10 485.0 9 025.3	32 658.1 26 371.1 25 024.8 23 646.2 20 754.0	1 540.5 1 335.9 1 410.7 1 279.7 962.7	2 390.7 1 920.9 1 828.3 1 961.8 1 661.1	94 (NA) (NA) (NA) (NA)	94 (NA) (NA) (NA) (NA)
1982 Census 1981 ASM 1980 ASM 1979 ASM 1978 ASM	17 332 (NA) (NA) (NA) (NA)	17 842 (NA) (NA) (NA) (NA)	3 184 (NA) (NA) (NA) (NA)	311.9 261.2 257.9 250.2 227.3	5 746.4 4 596.1 4 173.9 3 781.5 3 277.6	234.1 197.5 195.8 191.2 172.0	434.8 377.4 366.0 360.2 320.8	3 931.9 3 095.5 2 823.6 2 574.1 2 246.8	11 045.1 8 616.9 7 720.3 6 973.9 5 888.5	8 406.4 6 595.1 5 847.7 5 334.6 4 630.6	19 441.6 15 173.7 13 561.4 12 244.7 10 505.0	958.1 794.4 619.3 559.9 438.7	1 524.1 1 154.7 1 141.0 1 107.3 945.4	91 (NA) (NA) (NA) (NA)	93 (NA) (NA) (NA) (NA)
1977 Census 1976 ASM 1975 ASM 1974 ASM 1973 ASM 1972 Census	10 959 (NA) (NA) (NA) (NA) 8 161	11 320 (NA) (NA) (NA) (NA) 8 388	2 362 (NA) (NA) (NA) (NA) 2 135	216.3 193.7 189.0 188.1 192.3 184.0	2 984.1 2 490.5 2 256.9 2 121.3 2 010.1 1 835.3	163.7 145.6 142.0 142.0 147.8 139.6	307.4 286.5 267.3 271.0 279.9 264.2	2 045.7 1 704.7 1 537.1 1 466.9 1 405.4 1 266.2	5 338.4 4 408.5 3 853.0 3 705.7 3 511.1 3 155.1	4 061.6 3 312.9 2 902.3 2 615.1 2 229.1 1 992.7	9 359.7 7 705.0 6 751.3 6 297.9 5 721.5 5 124.8	360.2 238.0 226.6 204.3 238.0 220.6	861.9 659.9 599.6 634.3 490.7 373.5	87 (NA) (NA) (NA) (NA) (NA)	88 (NA) (NA) (NA) (NA) (NA)
					II	NDUSTRY	2754, CO	OMMERCIA	AL PRINTING	, GRAVURE	5				
1987 Census	(NA)	331	92	23.8	668.5	19.1	39.4	494.2	1 534.2	1 545.4	3 059.7	174.2	292.8	85	94
						INDUST	RY 2759,	COMMERC	CIAL PRINTIN	NG, N.E.C.5					
1987 Census	(NA)	10 096	1 382	125.7	2 480.6	88.5	173.3	1 498.5	5 290.5	3 695.1	8 951.8	297.7	788.4	92	88
						INDUS	TRY 2761	, MANIFOI	LD BUSINES	S FORMS					
1987 Census 1986 ASM 1985 ASM 1984 ASM 1983 ASM	(NA) (NA) (NA) (NA) (NA)	847 (NA) (NA) (NA) (NA)	583 (NA) (NA) (NA) (NA)	53.0 54.2 54.2 53.8 47.7	1 272.9 1 272.0 1 199.6 1 116.5 981.7	37.1 37.9 38.6 39.1 34.5	76.6 80.0 80.1 79.9 68.4	819.8 826.9 794.7 750.2 656.5	3 871.5 3 676.1 3 469.6 3 203.8 2 667.5	3 468.6 3 337.1 3 195.6 3 132.4 2 659.2	7 330.4 6 985.1 6 669.0 6 297.3 5 310.7	207.1 212.9 218.3 180.9 99.5	800.9 774.3 675.2 737.1 618.2	94 (NA) (NA) (NA) (NA)	97 (NA) (NA) (NA) (NA)
1982 Census 1981 ASM 1980 ASM 1979 ASM 1978 ASM	582 (NA) (NA) (NA) (NA)	810 (NA) (NA) (NA) (NA)	530 (NA) (NA) (NA) (NA)	49.5 48.4 49.2 50.2 46.7	934.0 859.6 784.5 710.3 634.5	36.2 35.8 36.9 38.3 34.8	71.1 70.9 72.7 74.2 68.7	634.3 570.2 525.5 490.1 433.1	2 490.7 2 394.3 2 183.7 2 051.5 1 692.2	2 563.1 2 363.5 2 100.7 1 907.5 1 616.4	5 058.7 4 734.7 4 279.0 3 929.1 3 298.5	135.4 6139.6 6168.1 6119.4 122.8	571.9 518.8 499.6 477.8 386.7	96 (NA) (NA) (NA) (NA)	97 (NA) (NA) (NA) (NA)
1977 Census 1976 ASM 1975 ASM 1974 ASM 1973 ASM 1972 Census	604 (NA) (NA) (NA) (NA) 533	795 (NA) (NA) (NA) (NA) 667	477 (NA) (NA) (NA) (NA) 376	45.3 38.8 40.2 44.5 40.9 38.6	575.0 468.0 440.1 445.8 385.6 343.6	33.3 29.2 29.8 33.8 30.6 28.8	67.3 58.4 58.4 67.9 62.5 58.6	390.9 317.1 292.0 309.4 264.8 235.2	1 491.6 1 201.7 1 155.5 1 325.1 978.6 823.6	1 418.0 1 132.9 1 024.7 1 013.8 739.9 612.3	2 893.8 2 327.9 2 184.9 2 304.6 1 708.4 1 429.7	82.1 58.6 74.6 67.4 52.2 45.8	336.7 289.6 283.2 348.9 196.6 143.8	93 (NA) (NA) (NA) (NA) 93	95 (NA) (NA) (NA) (NA) (NA)

Note: Establishments of single unit companies with up to 20 employees (cutoff varied by industry) were excluded from the mail portion of the census. Data for these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated) were estimated based on administrative-record information from other agencies in conjunction with industry averages. These establishments accounted for the following percent of total value of shipments: SIC 2752, 23%; SIC 2754, 5%; SIC 2759, 30%; and SIC 2761, 12%.

¹In annual survey of manufactures (ASM) years, data are estimates based on a representative sample of establishments canvassed annually and may differ from results of a complete canvass of all establishments. ASM publication shows percentage standard errors. Unless otherwise noted, for data prior to 1972, see 1972 Census of Manufactures, vol. II, table 1a of the Industry

chapter.

For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Includes establishments with payroll at any time during year.

Beginning with the 1982 Census of Manufactures, all respondents were requested to report their inventories at (the lower of) cost or market prior to adjustment to LIFO cost. This is a change from prior Censuses and annual surveys of manufactures in which respondents were permitted to value their inventories using any generally accepted accounting method. Consequently, inventories and value added by manufacture are not comparable to prior-year data.

Findustry definition is new for 1987 Census of Manufactures, An explanation of the Standard Industrial Classification revision will appear in the final industry series text that supercedes this

Estimates for new capital expenditures have associated standard error of 15 percent or more and may be of limited reliability. Estimates for other data items are of acceptable reliability.

### Table 2. Product and Product Classes—Value of Receipts of All Producers: 1987 and 1982

Uncludes receipts for activities classified in this industry by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). For meaning of

abbieviatio	abbreviations and symbols, see introductory text							
		198	87	1982				
1987 product code	Product	Number of companies with receipts of \$100,000 or more	Value of product receipts' (million dollars)	Number of companies with receipts of \$100,000 or more	Value of product receipts <sup>1</sup> (million dollars)			
2752	COMMERCIAL PRINTING, LITHOGRAPHIC (OFFSET)							
	Total	(NA)	31 904.7	(NA)	18 777.9			
27521	Magazine and periodical printing (lithographic) Magazines and periodicals (excluding magazine and comic supplements for Sunday newspapers):	(NA)	3 838.5	(NA)	2 536.2			
27521 12 27521 14 27521 17 27521 00	Sheet-fed	(NA) (NA) (NA) (NA)	610.9 2 603.5 173.7 450.4	421 209 22 (NA)	409.7 1 828.2 50.0 248.3			

### Table 2. Product and Product Classes—Value of Receipts of All Producers: 1987 and 1982—Con.

[Includes receipts for activities classified in this industry by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). For meaning of abbreviations and symbols, see introductory text]

abbreviatio	ons and symbols, see introductory text]					
		19	87	1982		
1987 product code	Product	Number of companies with receipts of \$10,000 or more	Value of product receipts* (million dollars)	Number of companies with receipts of \$100,000 or more	Value of product receipts <sup>1</sup> (million dollars)	
2752	COMMERCIAL PRINTING, LITHOGRAPHIC (OFFSET)—Con.					
27522 —	Label and wrapper printing (lithographic)  Printed labels, custom and stock, including bordered:  Made of paper:	(NA)	791.9	(NA)	677.0	
27522 15 27522 19 27522 18 27522 16 27522 20	Flat (except pressure-sensitive) Rolls (except pressure-sensitive) Pressure-sensitive (self-adhesive) Marginally punched, all types Made of other materials, except cloth Printed rolls and sheets (except bags, envelopes, pouches, etc.) for packaging purposes (printing only):	(NA) (NA) (NA) (NA) (NA)	392.3 19.1 90.7 17.7 8.1	(NA)	541.9	
27522 34 27522 43 27522 00	Paper (single-web) Other, including multiweb structures Label and wrapper printing (lithographic), n.s.k.	(NA) (NA) (NA)	71.3 38.3 154.4	31 5 (NA)	49.1 20.5 65.4	
27523 —	Catalog and directory printing (lithographic)Catalogs (including direct mail):	(NA)	2 825.5	(NA)	1 804.2	
27523 12 27523 14	Sheet-fedWeb-fed	(NA) (NA)	439.8 1 328.1	501 186	369.7 760.1	
27523 13	Directories: Telephone	(NA)	650.4	(NA)	300.1	
27523 24 27523 26	Other, including business reference services: Sheet-fed Web-fed	(NA) (NA)	65.6 94.7	70 44	41.6 97.1	
27523 00	Catalog and directory printing (lithographic), n.s.k.	(NA)	246.8	(NA)	235.6	
27524 — 27524 12	Financial and legal printing (lithographic)  SEC filing and prospectuses: Sheet-fed	(NA) (NA)	1 558.7 117.5	(NA) 49	957.5 87.2	
27524 14	Web-fed Annual reports and other corporate financial printing:	(NA)	265.1	22	102.7	
27524 16 27524 18	Sheet-fed Web-fed Other financial and legal printing, including insurance forms, security certificates, briefs, etc.:	(NA) (NA)	279.1 178.5	233 45	185.3 70.2	
27524 21 27524 22	Sheet-fed Web-fed Bank printing, including deposit slips, counter checks, business checks, imprinting of bank checks, etc., excluding checkbooks:	(NA) (NA)	94.9 81.8	140 29	126.9 37.3	
27524 24 27524 26 27524 27	mpnnung or bank checks, etc., excluding checkbooks:  Sheet-fed  Web-fed  Bank form printing, including printing of passbooks, debit and credit slips, ledger and statement sheets, installment-loan coupon books, etc.,	(NA) (NA)	80.1 71.9	67 28	96.9 91.9	
27524 00	excluding checkbooks	(NA) (NA)	61.8 328.0	53 (NA)	35.7 123.3	
27525 —	Advertising printing (lithographic)	(NA)	9 581.5	(NA)	4 985.1	
27525 12 27525 14	Sheet-fed	(NA) (NA)	1 244.4 1 255.7	806 241	665.5 594.0	
27525 23	Display advertising: Posters, including outdoor advertising, car cards, window Counter, floor displays, point-of-purchase, and other printed display material:	(NA)	132.4	(NA)	164.7	
27525 26 27525 28	Sheet-fed	(NA) (NA)	389.9 44.6	153 25	132.8 19.8	
27525 32 27525 33 27525 41	Rolls, including hi-fi and spectacolor Sections (2 pages or more) Shopping news Other advertising printing, including brochures, pamphlets, catalog sheets, circular folders, announcements, package inserts, book jackets, market circulars, magazine inserts, etc.:	(NA) (NA) (NA)	194.7 1 041.0 165.6	73 (NA) 99	154.3 774.3 74.1	
27525 51 27525 53	Sheet-fed Web-fed Advertising printing (lithographic), n.s.k.	(NA) (NA)	2 257.8 1 272.7	1 008 223	1 288.1 494.7	
27525 00 27526 —	Advertising printing (lithographic), n.s.k.  Other general job printing (lithographic)	(NA) (NA)	1 582.5 5 513.2	(NA) (NA)	623.0	
27526 11	Newspapers Scientific and technical recording charts and chart paper (containing preprinted grids and scale markings), except pen ruled:	(NA)	666.2	(NA)	540.3	
27526 16 27526 16 27526 21	Sheet-fed Web-fed Map, atlas, and globe cover printing, including road maps and strip maps Calendars and calendar pads:	(NA) (NA) (NA)	40.0 24.9 49.2	49 11 25	53.1 19.5 25.7	
27526 36 27526 38 27526 44	Sheet-fedWeb-fed	(NA) (NA)	105.3 34.6	91 22	76.5 67.1	
27526 47	Ticket, coupon, and food and beverage check printing, including transportation and amusement Playing cards, printed	(NA) (NA)	59.4 57.4	43 9	49.9 72.2	
27526 51	Decalcomanias and pressure-sensitives (self-adhesive), including bumper stickers, etc., except labels	(NA)	14.4	30	44.3	
27526 71	Trading stamps and all types of seals, including private and decorative stamps  Printing on metal:	(NA)	21.6	5	30.6	
27526 76 27526 78 27526 83	Sheet-fed	(NA) (NA) (NA)	230.2 4.7 31.8	10 4 27	70.2 14.8 48.6	
27526 92 27526 94	Business forms, n.e.c., excluding blankbooks and looseleaf forms:  Sheet-fed	(NA) (NA)	211.2 143.5	265 82	148.8 97.1	
27526 95 27526 96	Art reproductions and picture prints  Quick printing	(NA) (NA)	59.5 430.5	50 320	27.5 132.2	

### Table 2. Product and Product Classes—Value of Receipts of All Producers: 1987 and 1982—

[Includes receipts for activities classified in this industry by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). For meaning of abbreviations and symbols, see introductory text]

abbreviatio	its and symbols, see introductory text)	198	37	1982		
1987 product code	Product	Number of companies with receipts of \$100,000 or more	Value of product receipts' (million dollars)	Number of companies with receipts of \$100,000 or more	Value of product receipts <sup>1</sup> (million dollars)	
2752	COMMERCIAL PRINTING, LITHOGRAPHIC (OFFSET)—Con.					
27526 — 27526 98 27526 99	Other general job printing (lithographic) — Con. All other general commercial lithographic printing, n.e.c.: Sheet-fed Web-fed Other general job printing (lithographic), n.s.k	(NA) (NA)	1 562.1 393.5	678 96	757.8 114.5	
27526 00		(NA)	1 373.2	(NA)	952.6	
27520 — 275 <b>2</b> 0 00	Commercial printing, lithographic, n.s.k., Commercial printing, lithographic, n.s.k., typically for establishments with 5 employees or more (see note)	(NA) (NA)	7 795.3 6 194.6	(NA) (NA)	4 474.7 3 188.0	
27520 02	Commercial printing, lithographic, n.s.k., typically for establishments with less than 5 employees (see note)	(NA)	1 600.7	(NA)	1 286.7	
2754	COMMERCIAL PRINTING, GRAVURE					
	Total	(NA)	2 741.4	(NA)	2 159.0	
27541 — 27541 33	Magazine and periodical printing (gravure) Magazines and periodicals (excluding magazine and comic supplements	(NA)	562.1	(NA)	521.0	
27541 35	for Sunday newspapers) Magazine and comic supplements for Sunday newspapers	(NA) (NA)	428.7 108.3	11 6	334.3 180.3	
27541 00	Magazine and periodical printing (gravure), n.s.k.	(NA)	25.1	(NA)	6.4	
27542	Label and wrapper printing (gravure) Printed labels, custom and stock, including bordered:	(NA)	434.4	(NA)	437.4	
27542 11 27542 13	Made of paper: Flat (except pressure-sensitive)	(NA) (NA)	89.5 169.9	۱ ا		
27542 15 27542 15 27542 17	Rolls (except pressure-sensitive) Pressure-sensitive (self-adhesive) Made of other materials, except cloth	(NA) (NA)	4.9 71.6	(NA)	290.2	
27542 17	Printed rolls and sheets (except bags, envelopes, pouches, etc.) for packaging purposes:	(107.)	71.5			
27542 32 27542 37	Paper (single-web) Other, including multiweb structures	(NA) (NA)	37.9 44.8	17 13	77.7 55.4	
27542 00	Label and wrapper printing (gravure), n.s.k.	(NA)	15.8	(NA)	14.0	
27543 27543 00	Catalog and directory printing (gravure):  Catalogs and directories (including direct mail catalogs and telephone and business reference services directories)	(NA)	945.1	10	651.2	
27545	Advertising printing (gravure)	(NA)	479.0	(NA)	286.4	
27545 11	Direct mail, including circulars, letters, pamphlets, cards, and printed envelopes	(NA)		15	46.0	
27545 45 27545 48	Preprinted newspaper inserts (advertising supplements not regularly issued)  Other advertising printing, including shopping news, brochures, pamphlets,	(NA)	474.5	- 6	236.0	
27343 40	catalog sheets, circular folders, announcements, package inserts, book jackets, market circulars, magazine inserts, display advertising, etc	(NA)		7	4.2	
27545 00	Advertising printing (gravure), n.s.k.	(NA)	4.5	(NA)	.2	
27546 — 27546 51	Other commercial printing (gravure) Decalcomanias and pressure-sensitives (self-adhesive), including bumper	(NA)	177.4	(NA)	102.7	
27546 95	stickers, etc., except labelsAll other general commercial printing, gravure, n.e.c. (including	(NA)	23.2	8	18.0	
27546 00	customized stationery and business cards)Other commercial printing (gravure), n.s.k	(NA) (NA)	145.4 8.8	21 (NA)	78.7 6.0	
27540 27540 00	Commercial printing, gravure, n.s.kCommercial printing, gravure, n.s.k., typically for establishments with 5	(NA)	143.3	(NA)	160.4	
27540 02	employees or more (see note)	(NA)	113.9	(NA)	86.7	
	Commercial printing, gravure, n.s.k., typically for establishments with less than 5 employees (see note)	(NA)	29.4	(NA)	73.7	
2759	COMMERCIAL PRINTING, N.E.C.					
	Total	(NA)	9 181.2	(NA)	6 420.0	
27591 27591 12	Magazine and periodical printing (letterpress)	(NA)	157.8	(NA)	<sup>2</sup> 267.2	
27591 14	Sunday newspapers) Magazine and comic supplements for Sunday newspapers	(NA) (NA)	86.8 31.5	41    - (NA)	148.0 119.2	
27591 00 27592 —	Magazine and periodical printing (letterpress), n.s.k	(NA) (NA)	39.5 422.5	(NA)	483.8	
	Printed labels, custom and stock, including bordered:  Made of paper:	, , , ,		`		
27592 11 27592 13 27592 15	Flat (except pressure-sensitive)	(NA) (NA) (NA)	42.7 66.3 4.2			
27592 17	Pressure-sensitive:	(NA)	35.3	(NA)	226.0	
27592 19 27592 21	Rolls Made of other materials, except cloth Printed rolls and sheets (except bags, envelopes, pouches, etc.) for	(NA) (NA)	129.9 17.5			
27592 23 27592 27	packaging purposes (printing only): Paper (single-web)	(NA) (NA)	38.7 29.3	<sup>3</sup> 36 426	<sup>3</sup> 103.1 <sup>4</sup> 87.9	
27592 00	Other (including multiweb structures) Label and wrapper printing (letterpress), n.s.k.	(NA) (NA)	29.3 58.6	(NA)	<sup>2</sup> 66.8	
27593 — 27593 12	Catalog and directory printing (letterpress)Catalogs, including direct mail	(NA) (NA)	224.3 117.8	(NA) 40	<sup>2</sup> 224.0 84.1	
27593 18 27593 00	Directories, including telephone and business reference services Catalog and directory printing (letterpress), n.s.k	(NA) (NA)	79.2 27.3	(NA) (NA)	121.2 18.7	

### Table 2. Product and Product Classes—Value of Receipts of All Producers: 1987 and 1982—Con.

[Includes receipts for activities classified in this industry by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). For meaning of abbreviations and symbols, see introductory text1

		19	87	1982		
1987 product code	Product	Number of companies with receipts of \$100,000 or more	Value of product receipts <sup>1</sup> (million dollars)	Number of companies with receipts of \$100,000 or more	Value of product receipts <sup>1</sup> (million dollars)	
2759	COMMERCIAL PRINTING, N.E.C.—Con.					
27594 — 27594 11 27594 13 27594 15	Financial and legal printing (letterpress)  SEC filing and prospectuses  Annual reports and other corporate financial printing  Other financial and legal printing (including insurance forms, security	(NA) (NA) (NA)	258.4 36.2 47.6	(NA) 16 23	<sup>2</sup> 239.4 26.3 20.8	
27594 17 27594 19	certificates, briefs, etc.)  Bank printing (including deposit slips, counter checks, business checks, imprinting of bank checks, etc.) (excluding checkbooks)  Bank form printing, including printing of passbooks, debit and credit slips, ledger and statement sheets, installment-loan coupon books, etc.,	(NA) (NA)	36.0 97.0	38 34	30.4 122.1	
27594 00	excluding checkbooks Financial and legal printing (letterpress), n.s.k	(NA) (NA)	24.4 17.3	19 (NA)	16.9 23.0	
27595 27595 12	Advertising printing (letterpress)  Direct mail (including circulars, letters, pamphlets, cards, and printed	(NA)	640.2	(NA)	<sup>2</sup> 337.5	
	envelopes) Display advertising:	(NA)	209.0	70	66.9	
27595 14 27595 16	Posters (including outdoor advertising, car cards, window) Counter, floor displays, point-of-purchase, and other printed display	(NA) (NA)	23.9	37 13	32.9 12.0	
	material	(144)	30.0	13	12.0	
27595 18 27595 20 27595 22 27595 24	Rolls, including hi-fi and spectacolorSections (2 pages or more)Shopping newsShopping newsShopping printing, including brochures, pamphlets, catalog sheets,	(NA) (NA) (NA)	60.0 47.6 7.2	17 9 10	55.9 19.5 18.1	
27595 00	circular folders announcements, package inserts, book jackets, market circulars, magazine inserts, etc.  Advertising printing (letterpress), n.s.k.	(NA) (NA)	176.4 80.1	93 (NA)	68.4 63.8	
27596	Other general job printing (letterpress)	(NA)	1 230.4	(NA)	<sup>2</sup> 798.2	
27596 11 27596 13	Scientific and technical recording charts and chart paper (containing preprinted grids and scale markings), except pen ruled	(NA) (NA)	49.0	18 27	46.3 48.5	
27596 15	Newspapers	(NA)	229.1	23	46.5	
27596 17	Business forms, not elsewhere classified, excluding blankbooks and looseleaf forms Tags printed, including embossed	(NA)	111.4	75	45.7	
27596 19 27596 21	Tags printed, including embossed  Ticket, coupon, and food and beverage check printing, including	(NA)	61.6	36	81.8	
27596 23	transportation and amusementCalendars and calendar pads	(NA) (NA)	38.2 119.1	27 21	42.9 50.2	
27596 25	All other general commercial letterpress printing, n.e.c. (including customized stationery and business cards)	(NA)	372.5	219	251.8 214.0	
27596 00 27597 —	Other general job printing (letterpress), n.s.k	(NA) (NA)	233.9	(NA)	<sup>2</sup> 595.6	
27597 12 27597 14	Magazine and comic supplements for Sunday newspapers Printed labels, custom and stock (including bordered): Made of paper: Flat (except pressure-sensitive)	(NA)	55.5	(NA)	(2)	
27597 16	Flat (except pressure-sensitive) Rolls (except pressure-sensitive) Pressure-sensitive:	(NA)	60.3	(NA)	405.2	
27597 18 27597 20 27597 22	Flat	(NA) (NA) (NA)	54.0 522.3 55.1		403.2	
27597 24 27597 26	Cellophane (single-web)Paper (single-web)	(NA) (NA)	11.1 41.3	42 (³) ⁵51	69.1 (3)	
27597 28 27597 30 27597 32	Polyethylene (single-web) Other, including multiweb structures Financial and legal printing (including SEC filling and prospectuses, and	(NA) (NA)	82.5 98.2	°51 (4)	5121.3 (⁴)	
27597 34	annual corporate reports), bank printing (except checkbooks), bank form printing (except manifold), and other financial and legal printing ————————————————————————————————————	(NA)	10.8	(NA)	(2)	
27597 36	printing designed to sell products or services	(NA) (NA)	18.6 7.6		( )	
27597 38 27597 00	Other flexographic printing, n.e.c. Flexographic printing, n.s.k	(NA) (NA)	63.6 108.0			
27598 —	Screen printing, except on textiles	(NA)	1 200.9	(NA)	696.9	
27598 11 27598 13	FlatRolls	(NA) (NA)	72.9 44.2		440.0	
27598 15 27598 17	Other paper labels Made of other materials, except cloth Advertising printing: Display advertising	(NA) (NA)	8.6 103.4	(NA)	113.8	
27598 19 27598 21	Posters (including outdoor advertising, car cards, window) Counter, floor displays, point-of-purchase, and other printed display	(NA)	107.5	83	59.7	
27598 23	materialOther advertising printing	(NA) (NA)	89.0 22.7	66 30	62.6 35.7	
27598 25	Other general job printing:  Decalcomanias and pressure-sensitives (self-adhesive), including bumper stickers, etc.	(NA)	261.4	133	185.8	
27598 27 27598 29 27598 31	Printing on metal  Printing on glass or plastics containers for others  All other general commercial screen printing, n.e.c. (including customized printed stationery and business cards, excluding printing	(NA) (NA) (NA)	79.0 57.9	48 22	27.5 33.5	
27598 00	on apparel or fabrics)  Screen printing, except on textiles, n.s.k.	(NA) (NA)	153.2 201.0	67 (NA)	52.6 125.6	

### Table 2. Product and Product Classes—Value of Receipts of All Producers: 1987 and 1982—

[Includes receipts for activities classified in this industry by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). For meaning of abbreviations and symbols, see introductory text]

		19	87	1982		
1987 product code	Product	Number of companies with receipts of \$100,000 or more	Value of product receipts <sup>1</sup> (million dollars)	Number of companies with receipts of \$100,000 or more	Value of product receipts' (million dollars)	
2759	COMMERCIAL PRINTING, N.E.C.—Con.					
27599 — 27599 12 27599 22 27599 32 27599 00	EngravingSecuritySocialCommercial	(NA) (NA) (NA) (NA) (NA)	317.1 91.4 32.3 174.1 19.3	(NA) 8 34 175 (NA)	228.2 72.2 45.4 110.6	
2759A — 2759A 00	Nonimpact printing, using laser and ink-jet equipment:  Nonimpact printing, using laser and ink-jet equipment	(NA)	109.7	(NA)	( <sub>6</sub> )	
27590 27590 00	Commercial printing, n.e.c., n.s.k. Commercial printing, n.e.c., n.s.k., typically for establishments with 5	(NA)	3 397.2	(NA)	2 549.2	
27590 02	employees or more (see note)Commercial printing, n.e.c., n.s.k., typically for establishments with less	(NA)	2 663.4	(NA)	1 947.4	
	than 5 employees (see note)	(NA)	733.8	(NA)	601.8	
2761	MANIFOLD BUSINESS FORMS					
27612 — 27612 00	Unit set forms: Unit set forms, loose or bound (including all carbonless, carbonized, or carbon interleaved forms with an original and one copy or more, with or without stub, including food and beverage checks, multiple part tickets, etc.)	(NA)	6 718.2	(NA) 408	4 812.2 1 187.7	
27613 — 27613 00	Manifold books: Manifold books, including sales and pegboard accounting systems	(NA)	280.9	71	238.5	
27615 — 27615 00	Custom continuous forms: Custom continuous forms with or without carbon, marginally punched or not marginally punched (single or multiple copy custom forms usually printed on separate sheets which are fastened or unfastened)	(NA)	2 734.2	261	1 731.6	
27617 — 27617 00	Stock continuous forms:  Stock continuous forms (single or multiple copy stock forms usually printed on separate sheets which are fastened or unfastened)	(NA)	1 607.4	82	1 270.4	
27610 — 27610 00	Manifold business forms, n.s.k. Manifold business forms, n.s.k., typically for establishments with 5	(NA)	678.6	(NA)	383.9	
27610 00	employees or more (see note)  Manifold business forms, n.s.k., typically for establishments with less than	(NA)	455.3	(NA)	290.4	
	5 employees (see note)	(NA)	223.3	(NA)	93.5	

Note: In 1987 Census of Manufactures, data for establishments of small single-unit companies with up to 20 employees were estimated from administrative-record data rather than data actually collected from respondents. Employment cutoffs used for administrative records for each industry and shipments figures are included in code ending with "002". In both 1987 and 1982 Censuses of Manufactures, products not completely identified on standard forms were coded in appropriate product class (five-digit) followed by "00" or to appropriate product group code (four-digit) followed by "00" or to appropriate product group code (four-digit) followed by "00" or to appropriate product group code (four-digit) followed by "00" or to appropriate product group code (four-digit) followed by "00" or to appropriate product group code (four-digit) followed by "00" or to appropriate product group code (four-digit) followed by "00" or to appropriate product group code (four-digit) followed by "00" or to appropriate product group code (four-digit) followed by "00" or to appropriate product group code (four-digit) followed by "00" or to appropriate product group code (four-digit) followed by "00" or to appropriate product group code (four-digit) followed by "00" or to appropriate product group code (four-digit) followed by "00" or to appropriate product group code (four-digit) followed by "00" or to appropriate product group code (four-digit) followed by "00" or to appropriate product group code (four-digit) followed by "00" or to appropriate product group code (four-digit) followed by "00" or to appropriate product group code (four-digit) followed by "00" or to appropriate product group code (four-digit) followed by "00" or to appropriate product group code (four-digit) followed by "00" or to appropriate product group code (four-digit) followed by "00" or to appropriate product group code (four-digit) followed by "00" or to appropriate product group code (four-digit) followed by "00" or to appropriate group code (four-digit) followed b followed by "000"

#### Materials Consumed by Kind: 1987 and 1982 Table 3.

[Includes cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 material code	Material	1987 delivered cost (million dollars)	1982 delivered cost (million dollars)
	INDUSTRY 2752, COMMERCIAL PRINTING, LITHOGRAPHIC		
	Materials, parts, and supplies	12 126.9	7 112.9
262112	Newsprint	885.2	320.3
262116 262117	Uncoated paper: Sheets Rolls	705.6 1 058.7	643.6 686.3
262132 262134 220011 289101	Coated paper: Sheets Rolls Cloth and nonwoven fabrics for hardbound book covers Glues and adhesives	1 018.6 1 590.3 7.9 44.5	757.2 934.7 6.8 17.8
289311 289323 289303 289304 386153 279610 330006	Printing inks: Letterpress, including news Lithographic (offset) Flexographic Other, including gravure and screen process Unexposed diazo lithographic plates Other lithographic plates, exposed or unexposed Metal for lithographic plates	447.8 9.0 34.7 44.9 77.1	32.8 343.2 37.3 137.8 22.4

¹Data reported by all producers, not just those with receipts of \$100,000 or more.
²For 1982, product code 2759200 and product classes 27591, 27593, 27594, 27595, and 27596 included some printing by flexographic process. Thus, 1987 data for letterpress product codes (5- and 7- digit) may not be completely comparable with 1982 data.
³For 1982, product code 2759726 was included in product code 2759223.
⁴For 1982, product code 2759730 was included in 2759227.
⁵For 1982, product code 2759728 may include some printing by letterpress process.
⁵Product class 2759A is new for 1987. No prior year data are available.

### Materials Consumed by Kind: 1987 and 1982-Con.

[Includes cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendix. For meaning of abbreviations and symbols, see introductory text]

material code	Material	1987 delivered cost (million dollars)	1982 delivered cost (million dollars)
Code	INDUSTRY 2752, COMMERCIAL PRINTING, LITHOGRAPHIC—	(million dollars)	(minori donara)
	Con.		
279632 386101	Plates for flexographic printing Light-sensitive films and papers Pressure-sensitive base stock, self-adhesive, including paper, film, foil, etc.	7.4 139.6	(²) 120.6
267231 970099 971000	Pressure-sensitive base stock, self-adhesive, including paper, film, foil, etc. All other materials and components, parts, containers, and supplies Materials, parts, and supplies, n.s.k.1	27.1 1 296.7 4 639.4	13.2 <sup>2</sup> 1 195.6 1 843.3
	INDUSTRY 2754, COMMERCIAL PRINTING, GRAVURE		
	Materials, parts, and supplies	1 413.6	(NA)
262112	Newsprint	114.4	٦
000140	Uncoated paper: Sheets	1.2	
262116 262117	Rolls	1.2 225.0	
262132	Coated paper: Sheets	2.0	
262134 289101	RollsGlues and adhesives	380.6 8.2	(NA)
	Printing inks:		(140)
289311 289323	Letterpress, including news	12.1 23. <u>3</u>	
289303 289304	FlexographicOther, including gravure and screen process	.7 263.9	
386101 267231	Light-sensitive films and papers Pressure-sensitive base stock, self-adhesive, including paper, film, foil, etc	5.6 (³) 3171.1	
970099 971000	All other materials and components, parts, containers, and supplies Materials, parts, and supplies, n.s.k.1	205.5	
	INDUSTRY 2759, COMMERCIAL PRINTING, N.E.C.		
	Materials, parts, and supplies	3 233.6	(NA)
262112	Newsprint	121.6	The state of the s
262116	Uncoated paper: Sheets	123.9	
262117	Rolls	197.2	
262132	Coated paper: Sheets	109.7	
262134 220011	RollsCloth and nonwoven fabrics for hardbound book covers	153.6 2.8	
289101	Glues and adhesives	14.0	- (NA)
289311 289323	Printing inks: Letterpress, including news Lithographic (offset)	19.3 17.0	(144)
289303 289304	Flexographic Other, including gravure and screen process	30.9 23.8	
386153 279610	Unexposed diazo lithographic plates Other lithographic plates, exposed or unexposed	5.1 5.4	
330006 279632	Metal for lithographic platesPlates for flexographic printing	4.0 18.7	
386101 267231	Light-sensitive films and papersPressure-sensitive base stock, self-adhesive, including paper, film, foil, etc	14.6 237.8	
970099 971000	All other materials and components, parts, containers, and supplies Materials, parts, and supplies, n.s.k.1	484.5 1 649.7	
	INDUSTRY 2761, MANIFOLD BUSINESS FORMS		
	Materials, parts, and supplies	3 128.9	2 378.7
262131	Coated papers	162.6	41.4 1 157.5
262102 262150 289301	Groundwood, book, bond, writing, ledger, and manifold paper, uncoated	1 469.8 26.5 30.0	32.5 21.7
262164	Carbon paper: Carbonizing tissue stock for conversion into one-time carbon paper	37.5	72.5
395523 262163	One-time carbon paperCarbonless paper	116.1 476.5	145.3 255.6
970099 971000	All other materials and components, parts, containers, and supplies Materials, parts, and supplies, n.s.k.1	342.7 467.2	335.6 316.6

<sup>&</sup>lt;sup>1</sup>Total cost of materials of establishments that did not report detailed materials data, including establishments that were not mailed a form. <sup>2</sup>For 1982, material code 279632 was included in 970099. <sup>3</sup>For 1987, material code 267231 is included in 970099.

## APPENDIX Scope and Coverage and Explanation of Terms

#### GENERAL

The 1987 Census of Manufactures is the 32nd census of manufacturing establishments conducted in the United States. For 1987, it was conducted as part of the economic censuses, which included the censuses of mineral industries, construction industries, retail and wholesale trades, service industries, selected transportation activities, and minority-owned and women-owned businesses, under authority of title 13 of the United States Code. Title 13 specifies that an economic census be conducted every 5 years to cover years ending in 2 and 7.

#### SCOPE AND COVERAGE

### **Establishment Basis of Reporting**

The census of manufactures is conducted on an establishment basis. All manufacturing establishments with one paid employee or more at any time during the year are covered by the census of manufactures. Therefore, a company operating at more than one location is required to file a separate report for each location. This report excludes information for separately operated administrative offices, warehouses, garages, and other auxiliary units which service manufacturing establishments of the same company. Where these auxiliary operations are conducted at the same location as the manufacturing operation, they are usually included in the report for the operating manufacturing establishment.

#### **Use of Administrative Records**

From a universe of approximately 350,000 manufacturing establishments in the 1987 Census of Manufactures, approximately 150,000 small single-establishment companies were excused from filing reports. Selection of the small establishment nonmail cases was done on an industryby-industry basis. A variable cutoff was used to determine those establishments for which administrative records were to be used in place of a census report. The cutoffs were selected so the administrative-record cases would account for approximately 3 percent or less of the value of shipments for the industry. These cutoffs were then adjusted so that all single-establishment companies with less than 5 employees were excluded from the mail canvass, while all establishments with more than 20 employees were included. Where establishments in the 5 to 20 employee size range were included in the mail canvass, an abbreviated census form was frequently used.

For these nonmail establishments, (and a small number of larger establishment whose reports were not received at the time the data were tabulated) data on employment, payroll, and receipts were obtained from administrative records of other government agencies rather than from census forms. The administrative-record information was then used in conjunction with industry averages to estimate the data for these establishments. The value of shipments and cost of materials were not distributed among specific products and materials but were included in the product and material "not specified by kind" (n.s.k.) categories.

### **EXPLANATION OF TERMS**

Number of establishments and companies—A separate report was required for each manufacturing establishment (plant) with one employee or more. An establishment is defined as a single physical location where manufacturing is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

All employees-Includes all full-time and part-time employees on the payrolls at any time during the year. Included are all persons on paid sick leave, paid holidays, and paid vacations. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded. The "all employees" number is the average number of production workers plus the number of other employees in mid-March. The number of production workers is the average of those for midmonth payroll periods of March, May, August, and November.

**Production workers**–Includes workers up through the working-supervisor level engaged in fabricating, processing, assembling, inspecting, receiving, packing, warehousing, shipping (but not delivering), maintenance, repair, janitorial, guard services, product development, auxiliary production for plant's own use (e.g., powerplant), recordkeeping, and other closely associated services. Truckdrivers delivering ready-mixed concrete are also included in production workers.

Other employees-Includes nonproduction personnel, including those engaged in the following activities: supervision above working-supervisor level, sales (including driver/salespersons), sales delivery (truckdrivers and helpers), advertising, credit collection, installation and

servicing of own product, clerical and routine office functions, executive, purchasing, finance, legal, personnel (including cafeteria, etc.), professional, and technical employees.

Payroll-Includes the gross earnings for the "employees" defined above, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. Respondents were told that in reporting they could follow the definition of payrolls used for calculating the Federal withholding tax.

Production-worker hours-Covers hours worked or paid for at the plant, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave when the employee was not at the plant.

Cost of materials-Refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these materials. It includes the cost of materials or fuels consumed, regardless of whether they were purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.

The important components of this cost item are (a) all raw materials, semifinished goods, parts, containers, scrap, and supplies put into production or used as operating supplies and for repair and maintenance during the year; (b) electric energy purchased; (c) fuels consumed for heat, power, or generating electricity; (d) work done by others on materials or parts furnished by manufacturing establishments (contract work); and (e) products bought and resold in the same condition.

Specific materials consumed (table 3)-In addition to the total cost of materials which every establishment was required to report, information was also collected for most manufacturing industries on the consumption of major materials used in manufacturing. These inquiries were restricted to those materials which were important parts of the cost of production in a particular industry and for which cost information was available from manufacturers' records. Establishments consuming less than a specified amount (usually \$10,000) of a specific material were not requested to report consumption of that material separately. Also, the cost of materials for the small establishments for which administrative records were used was estimated as "not specified by kind" (n.s.k.).

Value of shipments and other receipts-Generally refers to received or receivable net selling values, f.o.b. plant (exclusive of freight and taxes), of all products shipped, both primary and secondary, as well as all

miscellaneous receipts such as receipts for contract work performed for others, installation and repair receipts, sale of scrap, and sale of products bought and resold without further processing. Included are all items made by or for the establishment from materials owned by it whether sold, transferred to other plants of the same company, or shipped on consignment. The net selling value of products made in one plant on a contract basis from materials owned by another was reported by the plant providing the materials.

In a few industries, the value of production or value of work completed is used instead of value of shipments. These industries are identified in the introduction and are footnoted in table 1.

In the case of multiunit companies, the manufacturer was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, that is, including not only the direct costs of production but also a reasonable proportion of "all other costs" (including company overhead and profit).

Shipments or production of individual products (table 2)-In the 1987 census, detailed shipment information was collected for approximately 11,000 individual products. These products are identified by a seven-digit code and are grouped into approximately 1,500 classes of products, which in turn are primary to 459 four-digit industries. Data at the five-digit product-class level have been collected each year as part of the annual survey of manufactures. Information at the seven-digit level, collected for many industries in the current industrial reports program, is not included in this table.

Value added by manufacture-This measure of manufacturing activity is derived by subtracting the cost of materials, supplies, containers, fuel, purchased electricity, and contract work from the value of shipments for products manufactured plus receipts for services rendered. The result of this calculation is then adjusted by the addition of value added by merchandising operations (that is, the difference between the sales value and cost of merchandise sold without further manufacturing, processing, or assembly) plus the net change in finished goods and work-in-process inventories between the beginning and end of the year.

For those industries where value of production is collected instead of value of shipments (see footnote in table 1), value added is adjusted only for the change in workin-process inventories between the beginning and end of the year. For those industries where value of work done is collected, the value added does not include an adjustment for the change in finished goods or work-in-process inventories.

Value added avoids the duplication in the figure for value of shipments which results from the use of products of some establishments as materials by others. Value added is considered to be the best value measure available for comparing the relative economic importance of manufacturing among industries and geographic areas.

Expenditures for new plant and equipment-Establishments in operation and any known plants under construction were asked to report their expenditures for (a) permanent additions and major alterations to manufacturing establishments and (b) new machinery and equipment used for replacement and additions to plant capacity if they are of the type for which depreciation accounts are ordinarily maintained.

These totals exclude expenditures for used plant and equipment, expenditures for land, and cost of maintenance and repairs charged as current operating expenses. Data for used plant and equipment will be published in the final industry bulletin.

End-of-year inventories-Comprised of (a) finished products; (b) work-in-process; and (c) materials, supplies, fuels, etc. Beginning in 1982, respondents were asked to report their inventories at (the lower of) cost or market prior to adjustment to LIFO cost. This is a change from prior years in which respondents were permitted to value their inventories using any generally accepted accounting method.

Therefore, 1982 through 1987 data for inventories are not strictly comparable to prior-year data.

**Specialization and coverage ratios**–An establishment is classified in a particular industry if its shipments of primary products of the industry exceed in value its shipments of the products of any other single industry. An establishments' shipments include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), and receipts for miscellaneous activities (merchandising, contract work, resales, etc.). The following ratios have been developed to measure the relationship of primary product shipments to the data on shipments for the industry shown in table 1 and data on product shipments shown in table 2.

**Specialization ratio**–Represents the ratio of primary product shipments to total product shipments (primary and secondary, excluding miscellaneous receipts) for the establishments classified in the industry.

Coverage ratio-Represents the ratio of primary products shipped by the establishments classified in the industry to the total shipments of such products that are shipped by all manufacturing establishments, wherever classified.

